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DISCOVERIES AND CURRENT EVENTS *

Angola: Locust Movements (*Nomadacris septemfasciata* and *Locusta migratoria migratorioides*) †

During the month of May, 1936, hoppers were reported in the districts of Luanda, Malange, Benguela, Quanza Sul, and Huila.

In the municipal district of Icolo and Bengo, district of Luanda, 157 hopper bands were destroyed at Onga Zanga, Cabiri, and Cassoneca; at Columbo 577 kilos of larvae were destroyed.

In the same month swarms were observed in the district of Luanda, 14 of which were destroyed, also in the districts of Quanza Norte, Congo, Sazaire, and Huila.

Greece: *Glyphodes* (*Margarodes*) *unionalis* on Olives §

In the district of Agrinion there is an olive grove of 200.000 trees renowned for the size and quality of the fruit. These trees have been treated every year for the last ten years against the olive fly (*Dacus oleae*, Rossi).

In 1936, for the first time, this olive grove has been invaded by *Glyphodes* (*Margarodes*) *unionalis*, Hb. The caterpillar of this parasite was frequently observed where two fruits touched each other; it was seen rarely on isolated fruits.

A great number of moths were caught by means of open traps containing molasses used as a supplement to arsenical sprayings against the olive fly.

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from Mr. JORGE DE BARROS RODRIGUES QUEIROZ, Director of the Laboratory of Plant Pathology and Agricultural Entomology of Luanda, attached as technical adviser to the Services of Locust Control, transmitted to the Institute by the Government General of the Colony.

§ Communication from the official correspondent of the Institute, Professor C. A. ISAAKIDÈS, Director of the Benaki Phytopathological Institute, Kiphissa, Athens, Greece.

Mozambique: Locust Movements (*Nomadacris septemfasciata* and *Locusta migratoria migratorioides*) *

During the month of July, 1936, the swarms were already in the phase of great flights.

In the north of the Colony, in the province of Niassa, two swarms appeared.

In the centre of the Colony a certain movement of locusts was observed, especially in the district of Tete.

In the south, in Inhambane, the swarms were in movement and tended to unite.

In the district of Lourenço Marques the same tendency was observed and in Manhiça a swarm appeared which having entered the territory some days before proceeding from Kruger Park settled on the banks of the Incomati to the north of Moamba.

On the southern frontier, in Catuane, swarms continued to enter from Zululand and others flew back over the border.

In conclusion, the situation in the month of July is better than in the same month of the past year though worse than in last June, which shows that the mortality of hoppers in the months of January, February and March was less than was expected.

Southern Rhodesia: Locust Invasion, 1932-1936 †

Monthly Report No. 45. August, 1936.

There has been a recrudescence of Red Locust (*Nomadacris septemfasciata*, Serv.) activity during the month and swarms have been reported from many districts, namely: — Salisbury, Mazoe, Lomagundi, Umtali, Victoria, Wankie, Hartley, Darwin, Insiza, Gutu, Bulawayo, Ndanga, Bubi, Mrewa, Balalima-Mangwe, Selukwe, Matobo, Gwelo, Mtoko and Melsetter.

The great majority of these swarms have been described as ' large '. On the 28th, a swarm visited Salisbury township and was timed when leaving in a N. N. E. direction. The locusts were then travelling fast and high and occupied approximately one and a half hours in passing over one point. Two swarms took three and two hours respectively to pass over Mtoko on the 16th and 19th, whilst another swarm in the Hartley district on the 19th was estimated to be from fifteen to twenty miles long.

No damage has been reported to the Department.

* Communication from Mr. JULIO GARDÉ ALFARO CARDOSO, Chief of the Entomological Section, Lourenço Marques, Mozambique, transmitted to the Institute by the ' Repartição Técnica de Agricultura ' of the Colony.

† Communication from the official correspondent of the Institute, Mr. RUPERT W. JACK, F. E. S., Chief Entomologist, Agricultural Laboratory, Department of Agriculture, Salisbury, Southern Rhodesia.

The number of reports received amounts to approximately two and one half times the number received in the month of August, 1935. It is evident that the present swarm cycle of *N. septemfasciata* cannot be regarded as definitely drawing to a close, and the possibility of a fairly extensive outbreak of hoppers during the coming rains cannot be ignored.

Turkey: Some Insects Injurious to Cultivated Plants *

Locusts. — The Moroccan locust (*Dociostaurus maroccanus*) and the Italian locust (*Calliptamus italicus*) have long been pests to agriculture in Turkey. As a result of effective control methods, the Moroccan locust has, since 1934, entered the solitary phase in some regions well known as being infested. The adults no longer arrive from the Syrian frontier.

Diaspis (*Aulacaspis*) *pentagona.* — The Mulberry Scale is frequent in the country where it especially attacks the mulberry, peach, walnut tree, etc. The Ministry of Agriculture has taken strong measures in the silk growing regions in order to lessen the damage caused. Very satisfactory results have been obtained by the introduction of *Prospaltella berlesei.*

Carpocapsa (*Cydia*) *pomonella.* — The Codling Moth is a redoutable pest in apple cultivation in Asia Minor. The Ministry of Agriculture has concentrated control measures in four apple-growing centres: Bolu (on the Black Sea), Amasya, Malatya and Nigde. Lead arsenate is used as an insecticide.

Hyponomeuta malinellus. — Against the Apple Ermine Moth, which is common in Asia Minor where it attacks chiefly the plum and apple trees, arsenical sprays are adopted.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — By Circular of 23 August, 1936, and in order to prevent the excessive multiplication of blackbirds, observed in all parts of the country, persons having a shooting-license are authorized, during the period from 1 September to 30 November, to shoot blackbirds. Capture is forbidden. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang Oktober 1936, 16. Jahrg., Nr. 10, S. 103).

*** By Notification of 1 September, 1936, the list of horticultural and botanical establishments, nurseries and gardens, which are subject to regular control as provided for by the International Convention of Berne on grape phylloxera [*Phylloxera vastatrix*] has been enlarged. (*Ibid.*).

Germany (Prussia). — By Decree of 22 June, 1936, amended by that of 26 August, 1936, the Douglas firs (*Pseudotsuga taxifolia*) will be subject to phytosanitary control in the province of Slesvig-Holstein.

* Communication from the official correspondent of the Institute, Mr. Sureya, State Councillor, Ankara, Turkey.

Any person cultivating Douglas firs for a commercial purpose is obliged to make a declaration to the Plant Protection Service at Kiel. This declaration must be made before the end of every year, and for the first time before 15 July, 1936.

The sale of Douglas firs is only allowed through an official certificate testifying that the plants have been examined and that they are recognized as healthy.

Any plant that is recognized as being diseased must be destroyed within 14 days.

These regulations are not applicable to one or two-year old Douglas firs, as the nurseries where they have grown will be under the permanent control of the Plant Protection Service and also as these nurseries are guaranteed as being free from the leaf-cast disease [*Rhabdocline pseudotsugae*]. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Oktober 1936, Bd. VIII, Nr. 7, S. 160-161).

Argentine Republic. — By Decree No. 84.433 of 15 June, 1936, and up to 30 October of the same year, exemption is accorded for the transport of non-disinfected cotton seed for industrial purposes coming from the zone declared to be infested by pink bollworm (*Platyedra gossypiella*). (*Boletín Oficial de la República Argentina*, Buenos Aires, 20 de agosto de 1936, año XLIV, núm. 12.639, pág. 851).

*** The Decree No. 84.823 of 20 June, 1936 prohibits the delivery from any part of the country to the provinces of Mendoza, San Juan, San Luis and the territories ef Neuquén, Río Negro, and Chubut, of fruits which are susceptible to the attacks of fruit flies (Trypetidae), including in this prohibition, damsons, peaches, custard apples, guavas, persimmons, citrus fruits, pears, mangoes, grapes and plums.

Exempted from the preceding disposition are the consignments of fruit from notoriously uninfested regions of provinces or territories, which may be decided by the Ministry of Agriculture through the 'Dirección de Sanidad Vegetal', which consignments, to be accepted for delivery by post, transport companies, etc. must be accompanied by a sanitary certificate of a special kind, in which the competent authority has stated this fact.

The Governors of the Provinces are requested to give their collaboration in order to effect the realization of this Decree. (*Ibid.* 25 de agosto de 1936, núm. 12.643, pág. 1105).

*** By Decree No. 86.069 of 14 July, 1936, one hundred thousand 'pesos' have been provided for purchasing live South American locusts [*Schistocerca paranensis*]. (*Ibid.*, 7 de septiembre de 1936, núm. 12.654, pág. 307).

*** The Decree No. 87.240 of 30 July, 1936, emphasises the dispositions of the Decree No. 86.069. (*Ibid.*, 18 de septiembre de 1936, núm. 12.664, pág. 883).

Canada. — The Destructive Insect and Pest Act Advisory Board, Department of Agriculture, Ottawa, Canada has published the revised Circular containing the Destructive Insect and Pest Act and Regulations thereunder which deal

with the importation of plants and plant products into Canada from other countries. (*The Destructive Insect and Pest Act and Regulations thereunder. Administered by the Department of Agriculture. Acts, Orders and Regulations No. 8 (3rd Revised edition, 1936)*, Ottawa, 1936, 36 pp).

British Possessions. — Under the title ' Summaries of Colonial Rules for Importation of Plants ', *Agriculture and Live-stock in India* has published summaries of plant import legislation in force into following countries:— Malta, Cyprus, Gambia, Sierra Leone, Gold Coast, Nigeria, Northern Rhodesia, Southern Rhodesia, Zanzibar, Kenya Colony, Uganda Protectorate, Nyasaland Protectorate, Mauritius, Palestine, Ceylon, Barbados, Jamaica, Antigua, Dominica, St. Kitts and Nevis, Montserrat, Trinidad and Tobago, St. Vincent, St. Lucia, Tonga (Friendly Islands), Gilbert and Ellice Islands Colony, British Solomon Islands. (*Agriculture and Live-stock in India*, Delhi, 1936, Vol. VI, Pt. IV, pp. 548-595).

Estonia. — By Decree of 2 July, 1936, amending the Decree No. 5115 of 20 July, 1931 [see this *Bulletin*, 1932, Nn. 2, pp. 26-27], it is established that products to be utilized in the control of plant diseases and pests, and weeds, which are admitted duty free, will have to be, for the privilege of the franchise, imported in their original packing, exemption being made for ' Meritol ' and arsenates of calcium and sodium which will be able to be imported in any kind of packing. (*Deutsches Handels-Archiv*, Berlin, 1. Septemberheft 1936, 90. Jahrg., S. 2706).

France. — By Ministerial Decree of 8 July, 1936, and for the purpose of improving on Article 8 of the Law of December, 1934, relative to the replacement of vines infested by grape phylloxera [*Phylloxera vastatrix*], vine growers should send an application with a plan of the plots attacked to the prefecture of the department where the vines to be replaced are situated before 1 June of each year.

The prefects will determine the infestation by grape phylloxera by means of a special Commission. Each department may constitute several Commissions.

The applications and reports drawn up by the Commissions will be forwarded by the prefects to the Ministry of Agriculture before 1 October of each year.

Before taking a decision the Ministry of Agriculture will submit these documents, for advice, to the Commission established by Ministerial Decree of 23 March, 1935 [see this *Bulletin*, 1935, No. 7, p. 159]. (Ministère de l'Agriculture. Direction de l'Agriculture. *Bulletin de l'Office de Renseignements Agricoles*, Paris, 15 juillet 1936, année 1936, n. 14, p. 309-310).

*** A Notification of the Ministry of Agriculture to importers of fresh fruits originating in the island of Puerto Rico, recalls that the territory of Puerto Rico having been recognized as free from the San José scale (*Aspidiotus perniciosus*], the consignments of fresh fruits originating in this island may be imported through any customs-house on the French maritime frontier, provided that they have been sent direct and that they are accompanied by a

certificate of origin according to the form published in the *Journal Officiel* of 2 June, 1932.

If the said consignments have made contact in an United States port, the territory of which has been recognized as infected with the San José scale, they can only be introduced into France under the following conditions:—

(1) To be imported through one of the following ports: Dunkerque, Bordeaux, Marseille.

(2) To be accompanied by a certificate according to the form published in the *Journal Officiel* of 4 May, 1932, delivered by the phytosanitary inspector of the port of landing in the United States.

(3) To have been sent directly from the American port to the French port.

(4) To be recognized by the phytosanitary inspectors of the French port as being free from all disease or dangerous parasites and especially from the San José scale. (*Ibid.*, 1er septembre 1936, nos 16-17, p. 380).

*** A Notification of the Ministry of Agriculture to exporters of potatoes indicates the conditions of admission to Morocco of potatoes originating and coming from France, according to the terms of the Vizirial Decree of 1 August 1936 [see this *Bulletin*, 1936, No. 10, p. 227]. (*Journal officiel de la République française*, Paris, 18 octobre 1936, LXVIIIe année, no 245, p. 10916-10917).

Italy. — By Ministerial Decree of 27 August, 1936, the commune of Monteroni d'Arbia, province of Sienna, has been declared infested with grape phylloxera [*Phylloxera vastatrix*]. (Ministero dell'Agricoltura e delle Foreste. *Bollettino Ufficiale*, Roma, 1o ottobre 1936, anno VIII, n. 19, p. 896).

*** By Ministerial Decree of 25 September, 1936, the commune of Chiusano di San Domenico, in the province of Avellino, has been declared infested with grape phylloxera. (*Ibid.*, 16 ottobre 1936, n. 20, p. 921).

Latvia. — The Decree No. 30 of 24 March, 1936 adds two preparations ' Billwärder ' and ' Nosprasit ' to the list of products used in the control of plant diseases and pests, which are admitted duty free [see this *Bulletin*, 1932, No. 9, p. 151]. (*Deutsches Handels-Archiv*, Berlin, 1. Septemberheft 1936, 90. Jahrg., S. 2765).

Morocco (French Zone). — A Decree of 18 July, 1936 authorises the destruction of wild boars causing great damage to crops situated in the territory of the bureau of native affairs of Azrou. (Empire chérifien. Protectorat de la République française au Maroc. *Bulletin Officiel*, Rabat, 24 juillet 1936, XXVe année, no 1239, p. 926).

*** By Decree of the Director of Economic Affairs, dated 3 September, 1936, and in conformity with the dispositions of the Vizirial Decree of 1 August, 1936 (12 joumada I 1355) relative to the application of sanitary measures to potatoes, tomatoes and egg plants on their entry into the French Zone of the Sheri-

fian Empire [see this *Bulletin*, 1936, No., 10 p. 227], the list of countries infested by the Colorado beetle [*Leptinotarsa decemlineata*] is as follows:— Belgium, Canada, the United States of America, Brazil, Mexico, France.

The list of countries adjoining the infested countries where the Colorado beetle has been reported at least 50 kilometres from their frontiers is as follows:— the Netherlands. (*Ibid.*, 11 septembre 1936, nº 1246, p. 1132).

*** A Decree of the Director of Economic Affairs, dated 10 September, 1936, establishes, in Article 1, that the importation or transit of products or objects enumerated in Article 5 of the Dahir of 20 September, 1927 [see *International Review of Agriculture*, 1928, No. 6, p. 571], may only take place by the ports of Casablanca or Port-Lyautey or by the frontier-post of Oujda.

According to the provisions of Article 1 of the present Decree:—

Potatoes may be inspected at Rabat, Mazagan, Safi and Mogador when the weight of the consignments is equal or superior to 20 quintals and at Agadir for consignments weighing a minimum of 100 quintals.

Used sacks may be inspected at Rabat, Mazagan, Safi and Mogador when the weight of the consignments is equal to or more than 20 quintals and at Martimprey-du-Kiss whatever the weight of the consignments.

Whenever fumigation or disinfection is prescribed by the officials charged with sanitary inspection in the ports or frontier-post enumerated above, the consignments are, at the choice of the consignee, returned or forwarded either to Casablanca or Port-Lyautey by sea, or to Oujda via Algerian territory.

Sanitary inspection cannot take place in the ports or frontier-post mentioned above except under the express condition that the importers interested are responsible for the costs of transport of the plant protection inspector, charged with this operation, from his place of residence to the port or frontier-post, also the indemnities for displacement calculated according to the official tariffs now in force.

These costs and indemnities are fixed at a round sum of 75 francs for Martimprey-du-Kiss. At the same time, these are not due from the importer if inspection is carried out on the occasion of the passage of the plant protection inspector.

The dispositions of the Decrees of the Director General of Agriculture of 27 March, 1931 [see this *Bulletin*, 1931, No. 4, p. 61], of 31 March, 1933 [*Bulletin*, 1933, No. 6, p. 131] and of 19 March, 1936 [*Bulletin*, 1936, No. 8, pp. 179-180], are revoked. (*Ibid.*, 18 septembre 1936, nº 1247, p. 1150).

*** By Vizirial Decree of 19 September, 1936 (3 rejeb 1355) the Administrative Commission of Syndical Associations for the control of plant parasites, instituted by Article 21 of the Dahir of 17 December, 1935 (20 ramadan 1354) [see this *Bulletin*, 1936, No. 5, pp. 107-108] is composed as follows:—

The Director of Economic Affairs, President,
The Director General of Finance, or his representative,
The Director of Political Affairs, or his representative,
The Chief of the Service of Agriculture and Colonisation,
A representative of the Secretary General of the Protectorate,
The Inspector General for Plant Protection,
An Inspector for Plant Protection,

Two farmers and two native planters or arboriculturists, selected by the Delegate at the Residence, on the proposal of the Director of Economic Affairs.

The Vizirial Decree of 17 December, 1935 (20 ramadan 1354) [see this *Bulletin*, 1936, No. 5, p. 108] relating to the same purpose is repealed. (*Ibid.*, 16 octobre 1936, nº 1251, p. 1242).

Peru. — By Decree of 22 June, 1936, orders are given for the control of the fruit fly (*Anastrepha* sp.) in the province of Tacna, in accordance with the scheme established by the ' Dirección ' of Agriculture and Colonisation. (*La Vida Agrícola*, Lima (Perú), agosto 1º de 1936, vol. XIII, no. 153, pág. 675).

Czechoslovakia. — By Ordinance of the customs authorities of Prague, dated 23 November, 1935, the control of live plants, fresh fruits, etc., coming from Spain, in order to prevent the introduction of San José scale [*Aspidiotus perniciosus*] will be limited henceforth to the control of samples taken at random. (*Deutsches Handels-Archiv*, Berlin, 1. Septemberheft 1936, 90. Jahrg., S. 2842).

RECENT BIBLIOGRAPHY

Allington, W. B. Sclerotial formation in Rhizoctonia solani as affected by nutritional and other factors. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 831-844, fig. 1. Literature cited, p. 844.

Andrews, F. W. The effect of leaf curl disease on the yield of the cotton plant. *The Empire Cotton Growing Review*, London, 1934, Vol. XIII, No. 4, pp. 287-298, graph I. Literature cited, p. 293.
[A virus disease].

Anstead, Rudolph D. Cultural methods of controlling plant diseases. *The Madras Agricultural Journal*, Coimbatore, S. India, 1936, Vol. XXIV, No. 8, pp. 292-295.

Averna Saccà, Rosario. Contribuição para o estudo das molestias cryptogamicas da laranjeira. *O Solo*, Piracicaba, Estado de S. Paulo, 1936, anno XXVIII, num. 3-4, pags. 58-60, fig. 1.
[*Nectria cancri* f. *aurantii*].

Ballou, Charles H. El zompopo. *C N A*, San Pedro de Montes de Oca, San José, Costa Rica, 1936, año I, núm. 6, págs. 100 a 102.
[*Atta sexdens*].

Beaumont, A. B. A hypothesis to explain brown root-rot of Havana seed tobacco. *Science*, Lancaster, Pa., 1936, New Series, Vol. 84, No. 2173, pp. 182-183.
[It seems that the unoxidized forms of nitrogen resulting from the decomposition of organic matter are indirectly the cause of this disease].

Bergman, Herbert F., and Wilcox, Marguerite S. The distribution, cause, and relative importance of cranberry fruit rots in Massachusetts in 1932 and 1933, and their control by spraying. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 656-664. Literature cited, p. 664.
[*Glomerella*, *Sporonema* and *Diaporthe* on *Vaccinium*].

BITANCOURT, A. A., and JENKINS, Anna E. Perfect stage of the sweet orange fruit scab fungus. *Mycologia*, Lancaster, Pa., 1936, Vol. XXVIII, No. 5, pp. 489-492, figs. 1-2. References, p. 49.
[*Elsinoe australis* n. sp., the perfect stage of *Sphaceloma fawcetti viscosa* now called *Sphacel. australis*].

BORZINI, Giovanni. Su di un marciume dei frutti di kaki. *Giornale di Agricoltura della Domenica*, Roma, 1936, anno XLVI, n. 42, p. 349.
[*Botrytis cinerea* on *Diospyros kaki*].

BRANDT, Herbert. Ueber die Aenderung des Geschlechtsverhältnisses bei Insekten und ihre Ursachen. *Arbeiten über physiologische und angewandte Entomologie aus Berlin-Dahlem*, Berlin-Dahlem 1936, Bd. 3, Nr. 3, S. 218-221.

BREDO, H.-J. Note sur la lutte biologique à entreprendre dans les plantations de café infestées par l'Antestia. *Agriculture et Elevage au Congo Belge*, Bruxelles, 1936, X^e^ année, n^o^ 8, p. 118.

BRENCHLEY, Winifred E., and WARINGTON, Katherine. The weed seed population of arable soil. III. The re-establishment of weed species after reduction by fallowing. *The Journal of Ecology*, London, 1936, Vol. XXIV, No. 2, pp. 479-501, figs. 1-8. References, p. 501.

BROWN, Nellie A. Privat and jasmine galls produced by a species of Phomopsis. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 8, pp. 795-799, fig. 1.
[*Phomopsis* sp. on *Ligustrum vulgare* and *Jasminum nudiflorum*].

BROWN, Nellie A., and GARDNER, F. E. Galls produced by plant hormones, including a hormone extracted from Bacterium tumefaciens. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 708-713, figs. 1-4.

BUA, Gaetano. Un quinquennio di osservazioni bio-ambientali sulla mosca delle olive. *La Meteorologia Pratica*, Perugia, 1936, anno XVII, n. 3, pp. 112-126, figg. 1-2.
[*Dacus oleae*].

CARTER, J. C. Thyrostroma compactum on Ulmus pumila. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 8, pp. 801-804, fig. 1.

CARTER, J. C. Cytosporina ludibunda on American elm. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 8, pp. 805-806.

CHESTER, K. Starr. Serological tests with Stanley's crystalline tobacco-mosaic protein. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 8, pp. 715-734, figs. 1-7. Literature cited, p. 734.

CHESTER, K. Starr. Separation and analysis of virus strains by means of precipitin tests. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 8, pp. 778-785. Literature cited, pp. 784-785.

CHOWDHURY, S. C. A disease of *Zea Mays* caused by *Colletotrichum graminicolum* (Ces.) Wils. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 833-843, fig. 1, pls. XLVIII-XLIX. References, p. 843.

CHRISTIE, J. R., and ARNDT, C. H. Feeding habits of the nematodes Aphelenchoides parietinus and Aphelenchus avenae. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 698-701, fig. 1.

CRISTINZIO, M. Studio sulla ruggine delle Drupacee (Puccinia Pruni-spinosae, Pers.). R. Osservatorio regionale di Fitopatologia di Portici (Napoli): Sezione di Patologia vegetale (Laboratorio di studio e sperimentazione) presso la Facoltà di Agraria della R. Università di Napoli. *Ricerche, osservazioni e divulgazioni fitopatologiche, per la Campania ed il Mezzogiorno*, V, Portici, 1936, pp. 15-60, figg. 1-5, tav. III-IV. Bibliografia, pp. 45-48.

DASTUR, R. H. A preliminary note on cotton failure in the Punjab and some abnormalities in the plant. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. II, pp. 377-395, pls. XXIX-XXXI. References, p. 395.

DELASSUS, [M.]. Un dangereux parasite du trèfle d'Alexandrie. *Bulletin de la Société des Agriculteurs d'Algérie*, Alger, 1936, 79e année, nº 495, p. 127-128.
[*Apion virens*].

DIEHL, R. Les problèmes actuels de l'amélioration et des champs d'expériences de pommes de terre. (Comportement des variétés à l'égard des maladies de dégénérescence). *Le Sélectionneur*, Versailles, 1936, vol. V, fasc. 2, p. 81-89.

DIXON, Lawrence F., MCLEAN, Ruth A., and WOLF, Frederick A. Relationship of climatological conditions to the tobacco downy mildew. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 8, pp. 735-759, figs. 1-5.
[*Peronospora tabacina*].

DOOLITTLE, S. P., and ALEXANDER, L. J. Injury to greenhouse tomatoes as a result of a combined infection with the viruses causing tomato and cucumber mosaic. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 920-923, figs. 1-2.

DORAN, William L. Vinegar as a soil disinfectant. *Science*, Lancaster, Pa., 1936, New Series, Vol. 84, No. 2177, pp. 273-274.

DRECHSLER, Charles. Pythium graminicolum and P. arrhenomanes. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 676-684, figs. 1-3. Literature clted, pp. 683-684.

DUFRÉNOY, [J.]. Le traitement du sol, désinfection, amendement, fumure, en vue de combattre chez les plantes agricoles de grande culture les affections parasitaires et les maladies de carence. *Annuaire agricole de la Suisse*, Berne, 1936, 37e année, 7e fasc., p. 679-728, fig. 1-10.

EDWARDS, E. T. Witches' broom of lucerne. A serious disease in inland areas. *The Agricultural Gazette of New South Wales*, Sydney, 1936, Vol. XLVII, Pt. 8, pp. 424-426, figs. 1-4.
[A virus disease].

EIDMANN, H. Die Nonne in Ostpreussen. Ein Beispiel moderner Organisation eines forstlichen Grossschädlingsproblem. *Arbeiten über physiologische und angewandte Entomologie aus Berlin-Dahlem*, Berlin-Dahlem 1936, Bd. 3, Nr. 3, S. 208-215.
[*Lymantria monacha*].

EIDMANN, H. Zur Frage der Blattwespen-Prognose. *Arbeiten über physiologische und angewandte Entomologie aus Berlin-Dahlem*, Berlin-Dahlem 1936, Bd. 3, Nr. 3, S. 229-234.
[*Diprion pini*].

ESCHERICH, K. Fortschritte der Forstentomologie. *Arbeiten über physiologische und angewandte Entomologie aus Berlin-Dahlem*, Berlin-Dahlem 1936, Bd. 3, Nr. 3, S. 183-186.

FAES, H. La préservation des plantes cultivées. D'une part, par la protection des auxiliaires naturels; d'autre part, par l'élevage et la multiplication d'animaux et végétaux ennemis des déprédateurs et parasites. *Annuaire agricole de la Suisse*, Berne, 1936, 37e année, 7e fasc. p. 759-773.
[With summary also in German].

FERNANDO, M. Mottle leaf of citrus: its incidence and control. *The Tropical Agriculturist*, Peradeniya, Ceylon, 1936, Vol. LXXXVI, No. 6, pp. 332-334, 1 pl. References, p. 334.
[A serious physiological disorder of citrus trees in Ceylon].

FISCHER, George W. The susceptibility of certain wild grasses to Tilletia tritici and Tilletia levis. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 876-886, figs. 1-3. Literature cited, pp. 887-888.

FOËX, E. La lutte contre les affections parasitaires des plantes de grande culture par l'adoption de méthodes de culture (assolement et travail du sol) rationnelles. *Annuaire agricole de la Suisse*, Berne, 1936, 37e année, 7e fasc., p. 668-678.

FRENCH, O. C. Application of sulfuric acid for weed control. *Agricultural Engineering*, Saint Joseph, Michigan, 1936, Vol. 17, No. 8, pp. 339-340, figs. 1-4.

FRIEDMANN, Giovanni. La lotta contro il maggior nemico dell'alpicoltura: il cervino ("Nardus stricta" L.). *L'Alpe*, Firenze, 1936, anno XXIII, n. 7-8, pp. 231-256, 6 figg.

FUCHS, W. H. Die Bestimmung der physiologischen Resistenz. *Der Forschungsdienst*, Neudamm und Berlin 1936, Bd. 2, Heft 6, S. 294-310. Schrifttum, S. 307-310.

GARNETT, C. B. Derris root. *The East African Agricultural Journal of Kenya, Tanganyika, Uganda and Zanzibar*, Nairobi, 1936, Vol. II, No. 2, pp. 111-113. References, p. 113.

GASSNER, G., und GOEZE, G. Einige Versuche über die physiologische Leistungsfähigkeit rostinfizierten Getreideblätter. *Phytopathologische Zeitschrift*, Berlin 1936, Bd. IX, Heft 4, S. 371-386, Abb. 1-13. Literatur, S. 385.
[*Puccinia*].

GASSNER, G., und HASSEBRAUK, K. Untersuchungen zur Frage der Getreiderostbekämpfung mit chemischen Mitteln. *Phytopathologische Zeitschrift*, Berlin 1936, Bd. IX, Heft 4, S. 427-454. Schriftennachweis, S. 454.
[*Puccinia* spp.].

GÄUMANN, Ernst. Quelques problèmes d'immunité. *Annuaire agricole de la Suisse*, Berne, 1936, 37e année, 7e fasc., p. 729-744, fig. 1-7. Littérature, p. 744.

GEHLSEN, C. A. Derris (Tubawurzel). *Der Tropenpflanzer*, Berlin 1936, 39. Jahrg., Nr. 8, S. 345-352. Literatur, S. 352.

GEORGI, C. D. V., LAMBOURNE, J., and TEIK, Gunn Lay. Preliminary selection experiments with Derris. *The Malayan Agricultural Journal*, Kuala Lumpur, 1936, Vol. XXIV, No. 8, pp. 374-389. References, p. 389.
[*Derris* spp.].

GOFFART, H. Neue Wirtspflanzen von Heterodera schachtii Schmidt. IV. Beitrag zu: Rassenstudien an Heterodera schachtii Schm. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1936, 46. Bd., Heft 8, S. 359-364. Schriftenverzeichnis, S. 364.

GOIDANICH, G[abriele]. Sulle cause della cosiddetta « defogliazione primaverile » del pioppo in alta Italia. *Rendiconti delle sedute della Reale Accademia Nazionale dei Lincei*, Classe di scienze fisiche, matematiche e naturali, Roma, 1936, vol. XXIV, fasc. 1-2, pp. 27-30.
[See this *Bulletin*, No. 10, 1936, p. 231].

GOKHALE, V. P. Preliminary observations on small-leaf disease in cotton. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. II, pp. 475-480. Reference, p. 480.
[The disease is a teratological malformation].

GÓMEZ-MENOR O., Juan. Un insecto que ataca al cocotero en su primera edad. *Revista de Agricultura y Comercio*, Ciudad Trujillo, República Dominicana, 1936, vol. XXVII, núm. 83, págs. 2570 y 2571, 5 figs.
[*Porphyraspis sanguinea*].

Goss, R. W. Fusarium wilts of potato, their differentiation and the effect of environment upon their occurrence. *American Potato Journal*, Sommerville, New Jersey and New Brunswick, New Jersey, 1936, Vol. XIII, No. 7, pp. 171-180. Literature cited, p. 180.

Greenfeld, E. K. An injurious weevil of the New Zealand flax. *Soviet Subtropics*, Moscow, 1936, 10 (26), pp. 44-48, 4 figs.
[In Russian, with title and summary in English. — *Trionymus diminutus* on *Phormium tenax*].

Guillemet, Raymond. Sur les punaises du blé et l'effet de leurs piqûres. *Comptes rendus hebdomadaires des séances de l'Académie des Sciences*, Paris, 1936, tome 203, nº 12, p. 570-573.
[*Aelia cognata*].

Gulati, A. N. A note on a new type of progressive damage to the structure of cotton hair caused by micro-organisms. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 861-865, fig. 1, pls. L-LI. References, p. 865.

Gulyás, Antal. A magyar dohányok virusbetegségei. *Kisérletügyi Közlemények*, Budapest 1936, XXXIX. köt., 1-3. füz., 45-70. o., I-IX. tábl. Irodalom, 68-70.o.
[In Hungarian, with titles and summaries also in German and French:— ' Über die Virus-Krankheiten des ungarischen Tabaks '. — 'Sur les maladies à virus du tabac hongrois '].

Gurney, Wm. B. In search of fruit fly parasites in India. A summary of investigations made in 1935. *The Agricultural Gazette of New South Wales*, Sydney, 1936, Vol. XLVII, Pt. 7, pp. 374-378, 9 figs.
[*Opius* spp. and *Syntomosphyrum indicum* collected in India for introduction into New South Wales as parasites of *Chaetodacus tryoni* and *Ceratitis capitata*].

Gurney, Wm. B. Parasites of white wax scales collected in East Africa. *The Agricultural Gazette of New South Wales*, Sydney, 1936, Vol. XLVII, Pt. 8, pp. 453-456, 464, 472, 6 figs., 1 map.
[*Scutellista cyanea, Diversinervus elegans, Bothreophryne ceroplastae*, etc., parasites of *Ceroplastes ceriferus* and *C. destructor*].

Hahn, Glenn Gardner. Immunity of Viking red currant from white pine blister rust under field conditions. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 860-875, figs. 1-2. Literature cited, p. 875.
[*Cronartium ribicola*].

Harris, W. Victor. The sisal weevil. *The East African Agricultural Journal of Kenya, Tanganiyka, Uganda and Zanzibar*, Nairobi, 1936, Vol. II, No. 2, pp. 114-126, figs. 1-9. References, p. 126.
[*Scyphophorus acupunctatus*].

Hilborn, M. T. The calorific value of decayed cordwood. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 905-914, fig. 1. Literature cited, p. 914.

Hildebrand, E. M. Overwintering of Erwinia amylovora in association with severe winter injury on Baldwin apple trees. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 702-707, fig. 1.
[*E. amylovora* = *Bacillus amylovorus*].

Holmes, Francis O. Comparison of derivatives from distinctive strains of tobacco-mosaic virus. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 896-904, fig. 1. Literature cited, p. 904.

HONIGMANN, H. L. Grossversuche mit einem neuen Vernebelungsverfahren zur Bekämpfung von Schadinsekten. *Arbeiten über physiologische und angewandte Entomologie aus Berlin-Dahlem*, Berlin-Dahlem 1936, Bd. 3, Nr. 3, S. 248.

HOPP, Henry. Appearance of Fomes igniarius in culture. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 915-917.

HUBAULT, Et. Un ennemi du sapin. *Revue des Eaux et Forêts*, Paris, 1936, tome LXXIV, IXe série, 34e année, nº 7, p. 611-614, 1 pl.
[Spread in France of *Dreyfusia nüsslini*].

HUNDERTMARK, A. Die Orientierung der Eiraupen der Nonne, *Lymantria monacha* L. *Arbeiten über physiologische und angewandte Entomologie aus Berlin-Dahlem*, Berlin-Dahlem 1936, Bd. 3, Nr. 3, S. 221-225, Fig. 1-2.

HUSAIN, M. Afzal, and AHMAD, Taskhir. Studies on *Schistocerca gregaria* Forsk. II. The biology of the desert locust with special relation to temperature. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. II, pp. 188-262, figs. 1-6. References, pp. 261-262.

HUSAIN, M. Afzal, and AHMAD, Taskhir. Studies on *Schistocerca gregaria* Forsk. VI. Influence of temperature on the intensity and extent of black pattern in the desert locust hoppers bred crowded. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 624-664, pls. XXXVI-XL. References, p. 654.

HUSAIN, M. Afzal, and BAWEJA, Kesho Das. Studies on *Schistocerca gregaria* Forsk. IV. Colour changes and sexual behaviour in desexualised *Schistocerca gregaria* adults. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 586-590. References, p. 590.

HUSAIN, M. Afzal, and BHATIA, Des Raj. Studies on *Schistocerca gregaria* Forsk. VII. Factors determining the movement of the vermiform larvae. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 665-671, figs. 1-4. Reference, p. 671.

HUSAIN, M. Afzal, and MATHUR, C. B. Studies on *Schistocerca gregaria* Forsk. V. Pigmentation and physical exertion. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 591-623, pls. XXXIII-XXXV. References, p. 623.

HUSAIN, M. Afzal, and MATHUR, C. B. Studies on *Schistocerca gregaria* Forsk. III. Why locust eat wool? A study in the hydromania of Schistocerca gregaria. *The Indian Journal of Agricultural Science*, Dehli, 1936, Vol. VI, Pt. II, pp. 263-267. References, p. 267.

ISLER, D. A. Engineering phases of pink bollworm control. *Agricultural Engineering*, Saint Joseph, Michigan, 1936, Vol. 17, No. 8, pp. 346-348, figs. 1-6.
[*Platyedra gossypiella*].

JACK, Rupert W. Southern Rhodesia. Locust invasion, 1932-36. Monthly Report No. 44. July, 1936. *The Rhodesia Agricultural Journal*, Salisbury, 1936, Vol. XXXIII, No. 9, p. 663.
[*Nomadacris septemfasciata*].

KALINENKO, V. O. The inoculation of phytopathogenic microbes into rubber-bearing plants by nematodes. *Phytopathologische Zeitschrift*, Berlin 1936, Bd. IX, Heft 4, S. 407-416, Fig. 1-7.
[Different species of *Bacterium* have been inoculated into *Taraxacum koksaghys* and *Scorzonera tau-saghys* by *Tylenchus* (*Tylenchorhynchus*) *multicinctus*, *T.* (*Chitinotylenchus*) *pratensis* and *Aphelenchus avenae*].

KATSURA, Saburo. The stunt disease of Japanese rice, the first plant virosis shown to be transmitted by an insect vector. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 887-895. Literature cited, p. 895.

KAUFMANN, O. Eine gefährliche Viruskrankheit an Rübsen, Raps und Kohlrüben. *Arbeiten aus der Biologischen Reichsanstalt für Land- und Forstwitschaft, Berlin-Dahlem*, Berlin 1936, XXI. Bd., Heft 4, S. 605-623, Abb. 1-10.

KHESWALLA, K. F. A Phoma disease of asparagus. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 800-802, pl. XLIII. References, p. 802.
[This appears to be the first record of *Phoma asparagi* in India].

KLEBAHN, H. Versuche über das Wesen des Virus der Mosaikkrankheit des Tabaks und über einige andere Viruskrankheiten. *Phytopathologische Zeitschrift*, Berlin 1936, Bd. IX, Heft 4, S. 357-370, Abb. 1-2. Literatur, S. 370.

KLOTZ, L. J. Nitrogen trichloride and other gases as fungicides. *Hilgardia*, Berkeley, California, 1936, Vol. 10, No. 2, pp. 27-52, figs. 1-7. Literature cited, pp. 51-52.

KOIDSUMI, Kiyoaki. Heat sterilization of Formosan fruits for fruit-flies (I). Preliminary determinations on the thermal death-points of *Chaetodacus ferrugineus* var. *dorsalis* Hendel and *C. cucurbitae* Coquillet. *Journal of the Society of Tropical Agriculture*, Taiwan (Formosa), Japan, 1936, Vol. VIII, No. 2, pp. 157-165. [Bibliography], p. 165.
[In Japanese, with title also in English].

KOIDSUMI, Kiyoaki. Heat sterilization of Formosan fruits for fruit-flies (II). Results on "Tankan" (*Citrus tankan* Hayata). *Journal of the Society of Tropical Agriculture*, Taiwan (Formosa), Japan, 1936, Vol. VIII, No. 2, pp. 166-175.
[In Japanese, with title also in English. — *Chaetodacus*].

KOIDSUMI, Kiyoaki, and SHIBATA, Kikuo. On the velocity of heating and cooling of some fruits. (A material for the control of fruit-flies). *Journal of the Society of Tropical Agriculture*, Taiwan (Formosa), Japan, 1936, Vol. VIII, No. 1, pp. 82-94, 17 graphs.
[In Japanese, with title also in English. — *Chaetodacus*].

KOSTOFF, Dontcho. Virus and genic reactions in morphogenetic, physiogenetic, and phylogenetic aspects. *Phytopathologische Zeitschrift*, Berlin 1936, Bd. IX, Heft 4, S. 387-405, Fig. 1-12. Literature cited, S. 404-405.

KUNIKE, Georg. Holzschädlinge und ihre Bekämpfung. *Anzeiger für Schädlingskunde*, Berlin 1936, XII. Jahrg., Heft 8, S. 89-95, Abb. 1-25.
[*Hylotrupes bajulus, Callidium æneum, C. violaceum, Anobium pertinax, A. strictum, Ernobius mollis, Lyctus linearis, Opilo domesticus, Camponotus ligniperda, Sirex gigas, S. augur, S.* (*Paururus*) *juvencus, Gracilia minuta, Dermestes lardarius, Niptus ololeucus*].

KUNKEL, L. O. Heat treatments for the cure of yellows and other virus diseases of peach. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 809-830, figs. 1-4. Literature cited, pp. 829-830.

LAFFOND, Pierre. Les insecticides à base de rotenone. *Bulletin de la Société des Agriculteurs d'Algérie*, Alger, 1936, 79e année, nº 495, p. 70-81. Bibliographie, p. 81.

LANGENBUCH, R. Die Bekämpfung des Kartoffelkäfers in Stade 1934. *Mitteilungen aus der Biologischen Reichsanstalt für Land- und Forstwirtschaft, Berlin-Dahlem*, Berlin 1936, Heft 52, 20 S., 10 Abb.
[*Leptinotarsa decemlineata*].

LEPORE, Mariano. Malattie delle piante coltivate. Manualetto pratico. Milano, Antonio Vallardi, [1936], 101 pp., 17 figg. (Biblioteca popolare di coltura Antonio Vallardi, n. 165).

LEROY, J. V. Observations relatives à quelques Hémiptères du cotonnier. *Publications de l'Institut National pour l'étude agronomique du Congo belge (I. N. E. A. C.), Bruxelles. Série scientifique N° 10, 1936.* Gembloux, [1936], 20 p., 9 fig., 18 pl. Index bibliographique, p. 20.
[*Lygus vosseleri, Deraeocoris oculatus, Empoasca facialis, Helopeltis bergrothi*].

LEUKEL, R. W. Factors influencing infection of barley by loose smut. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 630-642. Literature cited, p. 642.
[*Ustilago nigra*].

LINK, George K. K., and WILCOX, H. W. Relation of nitrogen-carbohydrate nutrition of Stayman apple trees to susceptibility to fire blight. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 643-655. Literature cited, pp. 654-655.
[*Erwinia amylovora = Bacillus amylovorus*].

LOUNSKY, J. Evolution et possibilités de la désinsectisation des produits végétaux par fumigation. *Bulletin de l'Institut agronomique et des Stations de Recherches de Gembloux*, Gembloux, 1936, tome V, n° 2, p. 153-159.
[With titles and summaries in Flemish, German and English].

MAC LEOD, G. F., and DICKINSON, Wm. Bordeaux spraying in relation to growth rate and yield of potatoes in Nassau County, Long Island. *American Potato Journal*, Sommerville, New Jersey and New Brunswick, New Jersey, 1936, Vol. XIII, No. 7, pp. 180-184, 2 graphs.

MANIL, P. Essais d'immunisation de plantules de betteraves contre Phoma betae Franck. *Bulletin de l'Institut agronomique et des Stations de Recherches de Gembloux*, Gembloux, 1936, tome V, n° 2, p. 210-211.

MARCHAL, E. Observations et recherches effectuées à la Station de Phytopathologie de l'Etat, pendant l'année 1935. *Bulletin de l'Institut agronomique et des Stations de Recherches de Gembloux*, Gembloux, 1936, tome V, n° 2, p. 105-111.
[With titles and summaries in Flemish, German and English].

MILES, Herbert W., and MILES, Mary. Insect pests of glasshouse crops. With a foreword by J. C. F. Fryer. Edited by H. C. Long. Surbiton, Surrey, H. C. Long, 1935, 174 pp., 15 figs., 21 pls. Selected bibliography, pp. 158-161.
[In this book Dr. and Mrs. Miles have tried to give growers an account of pests that occur in glasshouses, and of control measures that are suitable for dealing with such pests under the special conditions of glasshouse horticulture.
The present volume is divided in the following chapters:—

I. — Glasshouse conditions in relation to the occurrence and control of pests.
II. — General soil pests.
III. — Caterpillars and leaf miners.
IV. — Aphides, Capsids, and leaf-hoppers.
V. — White fly, mealy bugs, and scale insects.
VI. — Thrips and spider mites.
VII. — Eelworm pests.
VIII. — Woodlice, earwings, and miscellaneous pests.
IX. — Methods of pests control in glasshouses.

In the appendix an alphabetical list of chief glasshouse crops with associated pests and their characteristic injury is given].

MILLER, Paul R. Morphological aspects of Gymnosporangium galls. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 8, pp. 799-801, fig. 1.
[*Gymnosporangium juniperi-virginianæ*].

MILSUM, J. N. Derris cultivation in Perak. *The Malayan Agricultural Journal*, Kuala Lumpur, 1936, Vol. XXIV, No. 8, pp. 390-392. References, p. 392.

MIOTTO, A. Relazione sugli Osservatorî antiperonosporici istituiti in provincia nel 1936. *Il Gazzettino Agricolo*, Padova, 1936, anno XIV, n. 39, p. 2.
[*Plasmopara viticola*].

MÜLLER-BÖHME, H. Ist die Anwendung arsenhaltiger Insektenmittel für Wild und Geflügel gefährlich ? Kann man auf die Hilfe des Federwildes und des Hausgeflügels bei der Bekämpfung des Kartoffelkäfers rechnen ? *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1936, 46. Bd., Heft 9, S. 439-442.
[*Leptinotarsa decemlineata*].

MUNDKUR, B. B. On the systematic position of the smut causing malformation of *Vitis quadrangularis*. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 876-877. References, p. 877.
[*Mycosyrinx arabica*].

NĚMEC, Antonín. Über die Zusammensetzung der Mineralstoff in krebsbefallenen Kartoffelknollen. *Phytopathologische Zeitschrift*, Berlin 1936, Bd. IX, Heft 4, S. 417-425. Schriftenverzeichnis, S. 425.
[*Synchytrium endobioticum*].

PALTRINIERI, E. La processionaria del pino. *L'Alpe*, Firenze, 1936, anno XXIII, n. 7-8, pp. 240-247, 2 figg.
[*Thaumetopoea pityocampa*].

PANGGA, Guillermo A. A biological study on some common Philippine termites. *The Philippine Agriculturist*, Laguna, P. I., 1936, Vol. XXV, No. 3, pp. 233-265, figs. 1-6, Literature cited, pp. 253-254.
[*Cryptotermes nocens, Crypt. cynocephalus, Coptotermes vastator, Macrotermes gilvus, Nasutitermes luzonicus, Microcerotermes los-bañosensis, Hospitalitermes hospitalis*].

PAPE, Henrich. Die Praxis der Bekämpfung von Krankheiten und Schädlingen der Zierpflanzen. Zweite, neubearbeitete und erweiterte Auflage. Berlin, Verlagsbuchhandlung Paul Parey, 1936, VIII, 427 S., 303 Abb., 8 Farbendrucktaf. Schrifttum, S. 404-408.

PETERS, Gerhard. Chemie und Toxicologie der Schädlingsbekämpfung. Stuttgart, Verlag von Ferdinand Enke, 1936, 120 S., 22 Abb. (Sammlung chemischer und chemisch-technischer Vorträge. Neue Folge Heft 31).

PETIT, A. Le charbon du blé: biologie, moyens de lutte. Conférence faite à la Société des Agriculteurs de la Tunisie le 25 mars 1936. Tunis, Imprimerie Gorsse, Bascone & Muscat, [1936], 16 p.
[*Ustilago tritici*].

PIERSON, R. K. A method of separating the teliospores of Cronartium ribicola. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 923-925, fig. 1.

PRICE, W. C. Specificity of acquired immunity from tobacco-ring-spot diseases. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 665-675, figs. 1-3. Literature cited, pp. 674-675.
[Virus diseases].

RALEIGH, W. P. An abnormal graft reaction in potato resulting from a virus infection of a scion on a resistant stock. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 8, p. 795, fig. 1.

RAVAZ, L. Où en est la question du court-noué. *Le Progrès Agricole et Viticole*, Montpellier, 1936, 53e année, nº 31, p. 104-110.

REICKENDORFER, Paul. Über den Zerfall des Kupferkalkbrühe-Komplexes. (Ein analytischer Beitrag zur Kenntnis des „wasserlöslischen„ Kupfers). *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1936, 46. Bd., Heft 9, S. 418-438. Literatur, S. 437-438.

REPÚBLICA DEL PERÚ. MINISTERIO DE FOMENTO Y OBRAS PÚBLICAS. DIRECCIÓN DE AGRICULTURA, GANADERÍA Y COLONIZACIÓN. Sanidad vegetal. Leyes, decretos, resoluciones y reglamentos sobre la materia. Publicado por la Sección Técnica de Propaganda Agropecuaria. Lima, 1936, VII, 127 págs., 27 figs.

RICCARDO, S. Secondo contributo sperimentale per lo studio delle alterazioni interne delle castagne. Regio Osservatorio regionale di Fitopatologia di Portici(Napoli): Sezione di Patologia vegetale (Laboratorio di studio e sperimentazione) presso la Facoltà di Agraria della Regia Università di Napoli. *Ricerche, osservazioni e divulgazioni fitopatologiche, per la Campania ed il Mezzogiorno*, V, Portici, 1936, pp. 1-14, tav. I-II.
[See this *Bulletin*, 1935, No. 11, p. 262. — *Penicillium glaucum, Rhizopus nigricans, Bacterium coli commune, Cladosporium herbarum*].

RICCOBONO, Vincenzo. Coltura ed uso del piretro insetticida (*Chrysanthemum cinerariaefolium* Vis.). *Bullettino della R. Società Toscana di Orticultura*, Firenze, 1936, anno LXI, nn. 7-8, pp. 86-90.

RIPERT, J. Sur les méthodes d'analyse chimique du pyrèthre. *Annales des Falsification et des Fraudes*, Paris, 1936, XXIXe année, nº 330, p. 344-354. Bibliographie, p. 354.

ROCCHI, Marcello. Effetto dei fattori meteorologici sullo sviluppo della ruggine. Il periodo critico del frumento rispetto alla ruggine. *La Meteorologia Pratica*, Perugia, 1936, anno XVII, n. 2, pp. 58-65.
[*Puccinia* spp.].

ROCCHI, Marcello. Effetto dei fattori meteorologici sullo sviluppo e la diffusione della mosca dell'olivo. *La Meteorologia Pratica*, Perugia, 1936, anno XVII, n. 3, pp. 103-111.
[*Dacus oleæ*].

ROESLER, Rudolf. Herzlosigkeit an Blumenkohl durch Blasenfüsse (Thrips). *Anzeiger für Schädlingskunde*, Berlin 1936, XII. Jahrg., Heft 8, S. 95-97, Abb. 1-2.
[*Thrips tabaci*].

SACHTLEBEN, Hans. 50 Jahre Deutsches Entomologisches Institut der Kaiser Wilhelm-Gesellschaft. *Arbeiten über morphologische und taxonomische Entomologie aus Berlin-Dahlem*, Berlin-Dahlem 1936, Bd. 3, Nr. 3, S. 169-172.

SCHNELL, Raymond. Flexions pathologiques des rameaux d'Epicéa. *Revue générale de Botanique*, Paris, 1936, tome XLVIII, nº 574, p. 569-[588], fig. 1-10. Bibliographie, p. [588].
[*Adelges abietis*].

SCHNELLHARDT, Otto F., and HEALD, F. D. Pathogenicity tests with Botrytis spp. when inoculated into apples. *Phytopathology*, Lancaster, Pa., 1926, Vol. 26, No. 8, pp. 786-794, figs. 1-3. Literatur cited, p. 794.

SCHWERDTFEGER, F. Untersuchungen über die Eignung von Kalidüngemitteln zur Bekämpfung des Engerlings (*Melolontha melolontha* L. und *Melolontha hippocastani* F.). *Zeitschrift für Forst-und Jagdwesen*, Berlin 1936, LXVIII. Jahrg., 4. Heft, S. 177-209, Abb. 1-9. Literatur, S. 208-209.

SÉGUY, E. Code universel des couleurs. Paris, Paul Lechevalier, éditeur, 1936, 68 p., 48 pl. (720 couleurs). Bibliographie sommaire, p. 42 (Encyclopedie pratique du naturaliste, XXX).
[With summaries in Latin, German, English, Spanish, Italian and Portuguese.— An inventory of colours for facilitating the designation of colourings for the diagnoses of the three kingdoms of nature].

SEMPIO, C. Influenza di varie sostanze sul parassitamento: ruggine del fagiolo, ruggine e mal bianco del frumento. *Rivista di Patologia Vegetale*, Pavia, 1936, anno XXVI, nn. 7-8, pp. 201-278, graf. 1-16, figg. 1-6.Bibliografia, pp. 277-278.
[*Uromyces appendiculatus*, *Puccinia triticina*, *Erysiphe graminis*].

SEMPIO, C. Relazione tra il pH dei substrati culturali e l'azione a distanza del piombo. *Rivista di Patologia Vegetale*, Pavia, 1936, anno XXVI, nn. 7-8, pp. 279-297, graf. 1-6, figg. 1-5.

SHIBATA, Kikuo. Notes on the autecology of some fruit-flies (III). On the velocity and threshold of development of eggs of *Chaetodacus ferrugineus dorsalis* Hendel. *Journal of the Society of Tropical Agriculture*, Taiwan (Formosa), Japan, 1936, Vol. VIII, No. 1, pp. 95-101.
[In Japanese, with title also in English].

SPEYER, W. Die Wirkung von Rohbenzol auf das Pflanzenwachstum. *Zeitschrift für Pflanzenkrankheiten* (*Pflanzenpathologie*) *und Pflanzenschutz*, Stuttgart 1936, 46. Bd., Heft 9, S. 411-417, Abb. 1-7.

STELLWAAG, F. Schädlingsbekämpfung im Weinbau. Stuttgart-S., Verlag von Eugen Ulmer, [1936], 80 S., 36 Abb. (Grundlagen und Fortschritte im Garten -und Weinbau. Heft 24).

STELZNER, Gerhard. Ueber die Schädigung der Körnerernte durch den Pferdebohnenkäfer (Bruchus rufimanus). *Zeitschrift für Pflanzenkrankheiten* (*Pflanzenpathologie*) *und Pflanzenschutz*, Stuttgart 1936, 46. Bd., Heft 8, S. 353-358, Abb. 1-2.

STEVENSON, F. J., SCHULTZ, E. S., CLARK, C. F., RALEIGH, W. P., CASH, Lillian C., and BONDE, Reiner. Breeding for resistance to late blight in the potato. *American Potato Journal*, Sommerville, New Jersey and New Brunswick, New Jersey, 1936, Vol. XIII, No. 8, pp. 205-218. Literature cited, p. 218.
[*Phytophthora infestans*].

SUIRE, Jean. Contribution à l'étude des Coléophores parasites des arbres fruitiers. *Annales de l'Ecole Nationale d'Agriculture de Montpellier*, Montpellier, 1936, nouv. sér., tome XXIV, fasc. II, p. 137-158, pl. I-II. Travaux cités, p. 156-158.
[*Coleophora hemerobiella*].

SWINGLE, Roger U. A preliminary note on sexuality in Ceratostomella ulmi. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 925-927.

TAKAHASHI, Ryoichi. Hedges in Formosa considered from the standpoint of economic entomology. *Journal of the Society of Tropical Agriculture*, Taiwan (Formosa), Japan, 1936, Vol. VIII, No. 1, pp. 78-81.
[In Japanese, with title also in English].

TILEMANS, Em. Le roténone, préparation, et usages en Entomologie appliquée. *Bulletin de l'Institut agronomique et des Stations de Recherches de Gembloux*, Gembloux, 1936, tome V, nº 2, p. 186-205. Bibliographie, p. 198-205.
[With titles and summaries in Flemish, German and English].

TROTTER, A[lessandro]. Ulteriori osservazioni sulle "virosi" del *Cestrum Parqui* L'Her. R. Osservatorio regionale di Fitopatologia di Portici (Napoli): Sezione di Patologia vegetale (Laboratorio di studio e sperimentazione) presso la Facoltà di Agraria della R. Università di Napoli. *Ricerche, osservazioni e divulgazioni fitopatologiche, per la Campania ed il Mezzogiorno*, V, Portici, 1936, pp. 61-64, tav. V-VI.
[See this *Bulletin*, 1935, No. 11, p. 265].

TROTTER, A[lessandro]. Biologia della peronospora della vite e lotta antiperonosporica. R. Osservatorio regionale di Fitopatologia di Portici (Napoli): Sezione di Patologia vegetale (Laboratorio di studio e sperimentazione) presso la Facoltà di Agraria della R. Università di Napoli. *Ricerche, osservazioni e divulgazioni fitopatologiche, per la Campania ed il Mezzogiorno*, V, Portici, 1936, pp. 65-79, figg. 1-9, tav. VII.
[*Plasmopara viticola*].

ULLSTRUP, Arnold J. The occurrence of Gibberella fujikuroi var. subglutinans in the United States. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 685-693, figs. 1-2. Literature cited, p. 693.

UPPAL, B. N., and KAMAT, M. N. Gummosis of citrus in Bombay. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 803-822, figs. 1-2, pls. XLIV-XLVI. References, p. 822.
[The gummosis reported on *Citrus sinensis* is caused by a typical strain of *Phytophora palmivora* in the ' rubber group ' of that species].

UPPAL, B. N., and WESTON Jr., Wm. H. The basis for merging *Sclerospora indica* with *Sch. philippinensis*. *The Indian Journal of Agricultural Science*, Delhi, 1936, Vol. VI, Pt. III, pp. 715-719, pl. XLII. References, p. 719.

VAN DER VECHT, J. Proeven met derris tegen insectenplagen in Nederlandsch-Indië. *Landbouw*, Buitenzorg 1936, XI jaarg., no. 10, blz. 401-465, fig. 1-5. Literatuur, blz. 460-461.
[In Dutch, with title and summary in English:— 'Experiments with derris for control of insect pests in the Netherlands Indies'].

VOLKART, [A.]. Die Bekämpfung der Pflanzenkrankheiten durch die Züchtung immuner und resistenter Sorten. *Annuaire agricole de la Suisse*, Berne, 1936, 37e année, 7e fasc., p. 745-758. Literatur, p. 757-758.

v. FINCK, E. Untersuchungen über das Auftreten der Tachine *Parasetigena segregata* Rond. während einer Nonnenkalamität. *Arbeiten über physiologische und angewandte Entomologie aus Berlin-Dahlem*, Berlin-Dahlem 1936, Bd. 3, Nr. 3, S. 226-229.
[*P. segregata*, a parasite of *Lymantria monacha*].

v. TUBEUF. Agrilus betuleti Ratzb. an den Birken im forstbotanischen Garten in München. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1936, 46. Bd., Heft 9, S. 442-447, Abb. 1-2.

WATERMAN, Alma M., and MILLER, J. Armstrong. A die-back of Douglas fir. *Phytopatology*, Lancaster, Pa., 1936, Vol. 28, No. 8, pp. 804-805.
[*Sphæropsis* sp. on *Pseudotsuga taxifolia*].

WEISS, Alfredo L. Precauciones a tenerse en cuenta en la aplicación de cebos tóxicos contra la langosta. *La Propaganda Rural*, Montevideo, 1936, año XXXV, nº 800, pág. 61.
[*Schistocerca paranensis*].

WENZL, Hans. Das „ Blütenfeuer „ der Tulpen. (Ein verheerendes Auftreten des Tulpen- Grauschimmelpilzes Botrytis parasitica Cav.). *Gartenzeitung*, Wien 1936, Nr. 10, S. 123-125, Fig. 80-84.

WEST, J. Leaf curl of tobacco in Southern Nigeria. *Tropical Agriculture*, Trinidad, B. W. I., 1936, Vol. XIII, No. 9, pp. 242-244, 1 graph, 1 map, pls. I-III. References, p. 244.
[A virus disease].

WHEELER, E. J. Inoculation of potato seedlings with the yellow dwarf virus. *American Potato Journal*, Sommerville, New Jersey and New Brunswick, New Jersey, 1936, Vol. XIII, No. 8, pp. 221-223.

WHIPPLE, Otis C. Spotted wilt of garden pea. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 918-920, fig. 1.
[A virus disease].

WOLF, Frederick A., MCLEAN, Ruth A., and DIXON, Lawrence F. Further studies on downy mildew of tobacco. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 8, pp. 760-777, figs. 1-8. Literature cited, pp. 776-777.
[*Peronospora tabacina*].

WOLLENWEBER, H. W., und HOCHAPFEL, H. Beiträge zur Kenntnis parasitärer und saprophytischer Pilze. II. Monochaetia und Pestalotia und ihre Beziehung zur Fruchfäule. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1936, 46. Bd., Heft 9, S. 401-411, Abb. 1-7.
[Also see this *Bulletin*, 1936, No. 9, p. 215].

YARWOOD, Cecil E. The tolerance of Erysiphe polygoni and certain other powdery mildews to low humidity. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 9, pp. 845-859.

ZACHER, Friedrich. Milben-Schäden an Getreide, Mehl und anderen Waren. *Mitteilungen der Gesellschaft für Vorratsschutz E. V.*, Berlin 1936, 12. Jahrg., Nr. 5, S. 57-59, Abb. 1-2.

ZACHER, Friedrich. Beiträge zur Kenntnis einiger Vorratsschädlinge. *Arbeiten über physiologische und angewandte Entomologie aus Berlin-Dahlem*, Berlin-Dahlem 1936, Bd. 3, Nr. 3, S. 262-264.
[*Ephestia elutella, E. kühniella, Plodia interpunctella, Aphomia gularis, Tribolium destructor, Xylobiops basilare*].

ZAUMEYER, W. J., and KEARNS, C. W. The relation of aphids to the transmission of bean mosaic. *Phytopathology*, Lancaster, Pa., 1936, Vol. 26, No. 7, pp. 614-629. Literature cited, p. 629.

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